

CLAIMS

What is claimed is:

1. An apparatus that generates a video-reproducing clock signal from a 480p signal that includes a vertical synchronization signal, horizontal synchronization signals, and copy guard signals, the apparatus comprising:

a coast signal generating unit, which generates a plurality of coast signals with pulse widths, each of which covers the different number of copy guard signals on the basis of the present copy guard signal in one frame signal of the 480p signal; and

a clock signal generating unit, which generates horizontal synchronization signals at the same period as that of the horizontal synchronization signals generated in a previous frame, while the corresponding coast signal is being generated.

2. The apparatus of claim 1, wherein the coast signal generating unit comprises:
a counter that counts falling edges of signals in the present frame signal of the 480p signal; and

a coast signal generator that generates n coast signals with n different pulse widths on the basis of the counted falling edges of signals.

3. The apparatus of claim 2, wherein the coast signal generator generates a first coast signal with a pulse width that covers the number of falling edges and is less than 525, a second coast signal with a pulse width that covers the number of falling edges that ranges from 526 to 535, a third coast signal with a pulse width that covers the number of falling edges that ranges from 536 to 545, and a fourth coast signal with a pulse width that covers the number of falling edges that ranges from 546 to 558.

4. The apparatus of claim 1, wherein the clock signal generating unit generates a phase-locked clock signal using the horizontal synchronization signals, included in the 480p signal, while the coast signal is not being generated.

5. An apparatus that generates a video-reproducing clock signal from a 480p signal that includes a vertical synchronization signal, horizontal synchronization signals, and copy guard signals, the apparatus comprising:

a storage unit that stores information of the period of the horizontal synchronization signals generated in a previous frame;

a counter, that counts falling edges of signals generated after the vertical synchronization signal included in the 480p signal;

a coast signal generating unit that generates n coast signals with n different pulse widths on the basis of the count values of the counter; and

a clock signal generating unit that generates the horizontal synchronization signals with the period according to the information stored in the storing unit and generates a clock signal using the generated horizontal synchronization signals, while the coast signal is being generated, and that generates the clock signal using horizontal synchronization signals included in the 480p signal while the coast signal is not being generated.

6. The apparatus of claim 5, wherein the coast signal generating unit generates a signal with a reference pulse width that corresponds to a reference count value and generates signals with pulse widths, each of which is extended by a predetermined value.

7. The apparatus of claim 6, wherein the coast signal generating unit generates a first coast signal with a pulse width that covers the number of falling edges and is less than 525, a second coast signal with a pulse width that covers the number of falling edges that ranges from 526 to 535, a third coast signal with a pulse width that covers the number of falling edges that ranges from 536 to 545, and a fourth coast signal with a pulse width that covers the number of falling edges that ranges from 546 to 558.

8. A method of generating a video-reproducing clock signal from a 480p signal that includes a vertical synchronization signal, horizontal synchronization signals, and copy guard signals, the method comprising:

counting falling edges of signals generated after the vertical synchronization signal included in the 480p signal;

generating a plurality of coast signals on the basis of the counted number of falling edges of a counter; and

while a corresponding coast signal is being generated, generating the horizontal synchronization signals with a predetermined period and generating a clock signal using the generated horizontal synchronization signals, and, while the coast signal is not being generated, generating the clock signal using the present horizontal synchronization signals included in the 480p signal.

9. The method of claim 8, wherein generating the coast signal comprises generating n coast signals with n different pulse widths on the basis of the counted results.

10. The method of claim 9, wherein n coast signals include a first coast signal with a pulse width that covers the number of falling edges and is less than 525, a second coast signal with a pulse width that covers the number of falling edges that ranges from 526 to 535, a third coast signal with a pulse width that covers the number of falling edges that ranges from 536 to 545, and a fourth coast signal with a pulse width that covers the number of falling edges that ranges from 546 to 558.